

Title (en)
AN EBULLATED BED PROCESS FOR HIGH CONVERSION OF HEAVY HYDROCARBONS WITH A LOW SEDIMENT YIELD

Title (de)
FLIESSBETTVERFAHREN FÜR HOHE UMWANDLUNG VON SCHWEREN KOHLENWASSERSTOFFEN MIT SEDIMENTARMER AUSBEUTE

Title (fr)
PROCÉDÉ À LIT BOUILLONNANT DESTINÉ À LA CONVERSION ÉLEVÉE D'HYDROCARBURES LOURDS PRÉSENTANT UN FAIBLE RENDEMENT EN SÉDIMENTS

Publication
EP 3448964 A4 20191113 (EN)

Application
EP 17790172 A 20170424

Priority
• US 201662327057 P 20160425
• US 2017029059 W 20170424

Abstract (en)
[origin: US2017306250A1] An ebullated bed process for the hydroconversion of heavy hydrocarbon feedstocks that provides for high conversion of the heavy hydrocarbon with a low sediment yield. The process uses for its catalyst bed an impregnated shaped ebullated bed catalyst having a low macroporosity and a geometry such that its characteristic cross section perimeter-to-cross sectional area is within a specifically defined range.

IPC 8 full level
C10G 47/00 (2006.01); **C10G 47/26** (2006.01)

CPC (source: EP KR US)
B01J 23/28 (2013.01 - KR); **B01J 23/883** (2013.01 - EP US); **B01J 27/19** (2013.01 - EP US); **B01J 35/40** (2024.01 - EP US); **B01J 35/50** (2024.01 - EP KR US); **B01J 35/635** (2024.01 - EP US); **B01J 35/66** (2024.01 - EP US); **B01J 37/0009** (2013.01 - EP US); **B01J 37/08** (2013.01 - EP US); **C10G 47/12** (2013.01 - US); **C10G 47/26** (2013.01 - US); **C10G 49/12** (2013.01 - US); **C10G 65/00** (2013.01 - KR); **C10G 65/00** (2013.01 - US); **C10G 2300/202** (2013.01 - EP KR US); **C10G 2300/208** (2013.01 - EP KR US); **C10G 2300/70** (2013.01 - EP KR US)

Citation (search report)
• [X] WO 2013177018 A1 20131128 - SHELL OIL CO [US], et al
• [A] US 2014027344 A1 20140130 - HARRIS EVERETTE [US], et al
• See also references of WO 2017189396A1

Designated contracting state (EPC)
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DOCDB simple family (publication)
US 10703991 B2 20200707; US 2017306250 A1 20171026; CA 3021330 A1 20171102; CN 109072095 A 20181221; CN 109072095 B 20210611; EP 3448964 A1 20190306; EP 3448964 A4 20191113; JP 2019518129 A 20190627; JP 6896841 B2 20210630; KR 102462667 B1 20221104; KR 20180135906 A 20181221; TW 201807177 A 20180301; TW I736611 B 20210821; WO 2017189396 A1 20171102; ZA 201806704 B 20190731

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US 201715495129 A 20170424; CA 3021330 A 20170424; CN 201780025503 A 20170424; EP 17790172 A 20170424; JP 2019507067 A 20170424; KR 20187030428 A 20170424; TW 106113355 A 20170421; US 2017029059 W 20170424; ZA 201806704 A 20181009